AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-56. (Cancelled).

Claim 57. (New) A data conversion apparatus comprising:

reception means for receiving first data;

data conversion means for converting said first data into second data; and

transmission means for transmitting said second data,

wherein said first data is data having a PPP frame configuration and is octet-inserted or bit-inserted,

said second data is data having a frame configuration in which additional information including information for identifying a frame partition is added to a PPP frame configuration, or a frame configuration in which additional information including information for identifying a frame partition is added to a frame configuration flag-deleted from a PPP frame configuration, and is not octet-inserted or not bit-inserted, and

said information for identifying includes a frame length.

Claim 58. (New) A data conversion apparatus comprising:

reception means for receiving first data;

data conversion means for converting said first data into second data; and

transmission means for transmitting said second data,

wherein said first data is data having a frame configuration in which additional information including information for identifying a frame partition is added to a PPP frame configuration, or a frame configuration in which additional information including information for identifying a frame partition is added to a frame configuration flag-deleted from a PPP frame configuration, and is not octet-inserted or not bit-inserted,

said second data is data having a PPP frame configuration and is octet-inserted or bit-inserted, and

said information for identifying includes a frame length.

Claim 59.   (New) A data conversion apparatus comprising:

reception means for receiving first data;

data conversion means for converting said first data into second data; and

transmission means for transmitting said second data,

wherein said first data is data having a frame configuration of a data link layer protocol other than PPP,

said second data is data having a frame configuration in which additional information including information for identifying a frame partition is added to a PPP frame configuration, or a frame configuration in which additional information including information for identifying a frame partition is added to a frame configuration flag-deleted from a PPP frame configuration, and is not octet-inserted or not bit-inserted, and

said information for identifying includes a frame length.

Claim 60.   (New) A data conversion apparatus comprising:

reception means for receiving first data;

data conversion means for converting said first data into second data; and

transmission means for transmitting said second data,

wherein said first data is data having a frame configuration in which additional information including information for identifying a frame partition is added to a PPP frame configuration, or a frame configuration in which additional information including information for identifying a frame partition is added to a frame configuration flag-deleted from a PPP frame configuration, and being not octet-inserted or not bit-inserted,

said second data is data having a frame configuration of a data link layer protocol other than PPP, and

said information for identifying includes a frame length.

Claim 61.   (New) A data conversion method comprising:

a reception step of receiving first data;

a data conversion step of converting said first data into second data; and

a transmission step of transmitting said second data,

wherein said first data is data having a PPP frame configuration and being octet-inserted or bit-inserted,

said second data is data having a frame configuration in which additional information including information for identifying a frame partition is added to a PPP frame configuration, or a frame configuration in which additional information including information for identifying a

frame partition is added to a frame configuration flag-deleted from a PPP frame configuration,

and is not octet-inserted or not bit-inserted, and

said information for identifying includes a frame length.

Claim 62. (New) A data conversion method comprising:

a reception step of receiving first data;

a data conversion step of converting said first data into second data; and

a transmission step of transmitting said second data, wherein said first data is data having

a frame configuration in which additional information including information for identifying a

frame partition is added to a PPP frame configuration, or a frame configuration in which

additional information including information for identifying a frame partition is added to a frame

configuration flag-deleted from a PPP frame configuration, and is not octet-inserted or not bit-

inserted,

said second data is data having a PPP frame configuration and being octet-inserted or bit-

inserted, and

said information for identifying includes a frame length.

Claim 63. (New) A data conversion method comprising:

a reception step of receiving first data;

a data conversion step of converting said first data into second data; and

a transmission step of transmitting said second data,

wherein said first data is data having a frame configuration of a data link layer protocol

other than PPP,

said second data is data having a frame configuration in which additional information

including information for identifying a frame partition is added to a PPP frame configuration, or

a frame configuration in which additional information including information for identifying a

frame partition is added to a frame configuration flag-deleted from a PPP frame configuration,

and is not octet-inserted or not bit-inserted, and

said information for identifying includes a frame length.

Claim 64.   (New) A data conversion method comprising:

a reception step of receiving first data;

a data conversion step of converting said first data into second data; and

a transmission step of transmitting said second data,

wherein said first data is data having a frame configuration in which additional

information including information for identifying a frame partition is added to a PPP frame

configuration, or a frame configuration in which additional information including information for

identifying a frame partition is added to a frame configuration flag-deleted from a PPP frame

configuration, and is not octet-inserted or not bit-inserted,

said second data is data having a frame configuration of a data link layer protocol other

than PPP, and

said information for identifying includes a frame length.

Claim 65.   (New) A communication method in a third communication apparatus

located between a first communication apparatus and a second communication apparatus, the

first communication apparatus and the second communication apparatus performing data communication based on PPP, the communication method comprising the steps of:

receiving an LCP echo request transmitted by the first communication apparatus to the second communication apparatus; and

transmitting an LCP echo reply to the first communication apparatus.

Claim 66.   (New) The communication method as claimed in claim 65, wherein the third communication apparatus is a DCE.

Claim 67.   (New) The communication method as claimed in claim 65, wherein the third communication apparatus is a gateway.

Claim 68.   (New) A communication method in a third communication apparatus located between a first communication apparatus and a second communication apparatus, the first communication apparatus and the second communication apparatus performing data communication based on PPP, the communication method comprising the steps of:

receiving an LCP discard request transmitted by the first communication apparatus to the second communication apparatus; and

discarding the LCP discard request.

Claim 69.   (New) The communication method as claimed in claim 68, wherein the third communication apparatus is a DCE.

Claim 70.   (New) The communication method as claimed in claim 68, wherein the third communication apparatus is a gateway.

Claim 71.   (New) A communication method in a third communication apparatus located between a first communication apparatus of a first node and a second communication apparatus of a second node, the communication method comprising the steps of:

intermediating a setting request packet from the second communication apparatus to the first communication apparatus;

receiving a setting rejection packet or a setting negation packet from the first communication apparatus;

producing a setting request packet according to the setting rejection packet or the setting negation packet; and

transmitting the produced setting request packet to the first communication apparatus.

Claim 72.   (New) The communication method as claimed in claim 71, wherein the third communication apparatus notifies setting rejection or setting negation to the second communication apparatus by transmitting only information included in a setting rejection packet or a setting negation packet to the second communication apparatus, when the third communication apparatus receives the setting rejection packet or the setting negation packet from the first communication apparatus, after intermediating a setting request packet from the second communication apparatus to the first communication apparatus.

Claim 73.　　(New) The communication method as claimed in claim 71, wherein the third communication apparatus terminates a setting identification packet when the third communication apparatus receives the setting identification packet after intermediating a setting request packet from the second communication apparatus to the first communication apparatus and receiving a setting rejection packet or a setting negation packet from the first communication apparatus, and the third communication apparatus does not terminate a setting identification packet when the third communication apparatus receives the setting identification packet without receiving a setting rejection packet or a setting negation packet from the first communication apparatus after intermediating a setting request packet from the second communication apparatus to the first communication apparatus.

Claim 74.　　(New) A communication method in a third communication apparatus located between a first communication apparatus of a first node and a second communication apparatus of a second node, the communication method comprising the steps of:

intermediating a setting request packet from the first communication apparatus to the second communication apparatus;

intermediating a notification of setting rejection or setting negation from the second communication apparatus to the first communication apparatus;

receiving a setting request packet from the first communication apparatus; and

terminating the received setting request packet.

Claim 75.　　(New) The communication method as claimed in claim 74, wherein the third communication apparatus produces a setting rejection packet or a setting negation packet

and transmits it to the first communication apparatus, when the third communication apparatus receives a notification of setting rejection or setting negation from the second communication apparatus after intermediating a setting request packet from the first communication apparatus to the second communication apparatus.

Claim 76.   The communication method as claimed in claim 74, wherein the third communication apparatus produces a setting identification packet and transmits it to the first communication apparatus, when the third communication apparatus receives from the first communication apparatus, all of setting request packets according to notifications of setting rejection or setting negation from the second communication apparatus to the first communication apparatus after intermediating setting request packets from the first communication apparatus to the second communication apparatus and intermediating the notifications.

Claim 77.   A communication method in a third communication apparatus located between a first communication apparatus of a first node and a second communication apparatus of a second node, the communication method comprising the steps of

intermediating a notification of an end request from the first communication apparatus to the second communication apparatus:

producing an end identification packet; and

transmitting the produced end identification packet to the first communication apparatus.

Claim 78.   (New) The communication method as claimed in claim 77, wherein the third communication apparatus produces an end request signal and transmits it to the second communication apparatus, when the third communication apparatus receives an end request packet from the first communication apparatus.

Claim 79   (New) The communication method as claimed in claim 77, wherein the third communication apparatus produces an end request packet and transmits it to the first communication apparatus, when the third communication apparatus receives a notification of an end identification from the second communication apparatus after intermediating a notification of an end request from the first communication apparatus to the second communication apparatus.

Claim 80.   (New) The communication method as claimed in claim 79, wherein the third communication apparatus terminates an end identification packet, when the third communication apparatus receives the end identification packet from the first communication apparatus after transmitting the produced end request packet.

Claim 81.   (New) A communication method in a third communication apparatus located between a first communication apparatus of a first node and a second communication apparatus of a second node, the communication method comprising the steps of:

intermediating a notification of an end request from the second communication apparatus to the first communication apparatus;

receiving an end identification packet from the first communication apparatus; and

terminating the end identification packet.

Claim 82.   (New) The communication method as claimed in claim 81, wherein the third communication apparatus produces an end request packet and transmits it to the first communication apparatus, when the third communication apparatus receives a notification of an end request from the second communication apparatus.

Claim 83.   . (New) The communication method as claimed in claim 81, wherein the third communication apparatus produces an end identification signal and transmits it to the second communication apparatus, when the third communication apparatus receives an end request packet from the first communication apparatus after intermediating a notification of an end request from the second communication apparatus to the first communication apparatus.

Claim 84.   (New) The communication method as claimed in claim 83, wherein the third communication apparatus produces an end identification packet and transmits it to the first communication apparatus after transmitting the produced end identification signal.

Claim 85.   (New) A communication method in a third communication apparatus located between a first communication apparatus of a first node and a second communication apparatus of a second node, communication method comprising the steps of:

receiving an echo request packet from the first communication apparatus to the second communication apparatus;

terminating the echo request;

producing an echo response packet; and

transmitting the echo response packet to the first communication apparatus.

Claim 86.   (New) The communication method as claimed in any one of claims 71,

74, 77, 81 and 85, wherein the third communication apparatus is a mobile station.